

Tennessee Pollution Prevention Partnership Success Story



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Cougars Continue Greening Centennial

The Member

Centennial High School's Ecology and AP Environmental Science (APES) classes teamed up to perform hands-on projects inside and outside the school. Through these projects, the classes learn about human impacts on the environment. These classes identified and worked toward environmental goals they decided could create a better environment on campus and in the local community.

The Story

It was great to see so many students working on environmental projects at Centennial. The students worked very hard and involved more of the school community. This year, one of the Ecology teachers volunteered her students to run the recycling program at Centennial. The APES filmed a Public Service Announcement on recycling entitled "Recycling – Womb to Tomb". The filming was done with student actors, students filming and students editing. The PSA won awards locally and at the state competition.

The APES continued work with last year's solar panel project by relocating the greenhouse and panels to another part of the campus due to a new playground. They lined the bottom of the greenhouse with re-used crushed glass from another area of the campus that was being renovated. They hosted an informative session about the solar panel project during an evening Open House for parents, and students volunteered on their day off to present the importance of alternative energy at Parent/Teacher Conferences.

The APES also continued the EPA Indoor Air Quality Tools for Schools program for the second year. Students spent the 1st semester researching all aspects of indoor air quality and reviewing last year's checklists and complaints. They made a PowerPoint presentation to the teachers after school at their faculty meeting. They distributed IAQ information that included the teacher checklists and instructions. When the teachers returned the packets, the students compiled the data and did a walk-through of the building. They had 2 teacher representatives and an administrative representative on the air quality team. The team found 3 exhaust fans not running, learned about outside air requirements, and were able to give the teachers a better peace of mind about the indoor air. Since last year's introduction to the Tools for Schools program, the teachers are more proactive about their role in the IAQ of the building. To improve outdoor air quality, the students continued their tradition of Carpool To School Day, which took place in May this year.

At the same time they did the IAQ walk-throughs, students also performed energy patrol duties and checked for water leaks, measuring the loss per minute at each faucet. The maintenance department repaired all leaking faucets. Extending water quality work into the community, students participated in a Harpeth River clean up on a Saturday and cleaned up the river by canoe for 4 hours. They also took water samples near the sewage treatment plant and found high levels of total coliform bacteria.

In the meantime, the 2nd Ecology teacher continued the student-driven litter pick-ups. The campus looked great after their clean up, but students took a preventive approach by having trashcans installed in each of the grassy medians throughout the parking lot. The students had to work with custodial staff to have the cans installed and emptied regularly.

The Success

This year over 150 students influenced the environment on Centennial's campus and in the community. They educated over 200,000 homes through their PSA about recycling. Students at Centennial will be able to utilize the solar panels as a learning tool for years to come. They informed parents about alternative energy. The students were instrumental in energizing the Tools for Schools program at Centennial. They learned the impact everyone can have on their indoor air environment, and things they can do to make it better. Three exhaust fans were repaired as a result of the IAQ walk-through, which will improve indoor air. 312 students participated in the Carpool to School day. Students identified and had 17 faucets repaired. At \$0.15/gallon for water and sewer charges, \$876/year was saved, providing a two-year payback on the repairs. Students improved the condition of the Harpeth River and learned about impacts of sewage treatment plants on rivers. They took action on the trash problem on campus and made a measurable difference.

The Pollution Prevented

As a result of the leak repairs, 5840 gallons/year of wasted water was prevented. By carpooling, the students contributed to cleaner air in their community and conserved gasoline. Before the installation of the trashcans, campus litter averaged 240 gallons (eight 30-gallon bags) weekly. Most of the trash was found in the large parking lots from students' paperwork, fast food, and drink containers. After the installation of the trashcans, there is an average of 40 gallons of litter weekly, one-third of which is recycled. Most of this litter is collected along the local road next to the school and likely comes from passing vehicles.

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